

# Desktop 4500 System

## Installation and User Guide

Includes Liberty Printer
110715-000 Revision D





### Use this manual to help you:

- Select and configure your PC.
- Install and cable the Desktop autoloader and printer.
- Operate autoloader functions.

### Desktop 4500 Autoloader - Model RAS13

#### **Notice for USA**



Tested to Comply with FCC Standards FOR HOME OR OFFICE USE. This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any unauthorized modification to this equipment may result in the revocation by the FCC of the user's authority to operate this equipment.

This product complies with UL 60950 3rd Edition.

#### **Notice for Canada**

This Class B digital apparatus complies with Canadian  $\underline{ICES-003}$ . Cet appareil numerique de la classe B est conforme a la norme  $\underline{NMB-003}$  du Canada.

This product complies with CAN/CSA-C22.2 No. 60950-00 3rd Edition.

#### **Notice for Europe**



This product is in conformity with the EMC Directive (89/336/EEC) and the Low-Voltage Directive (73/23/EEC) through compliance with the following European standards: EN 55022: 1998 + Amd. 1: 2000 Class B Limit; EN 55024; EN 60950. The CE mark has been affixed in accordance with the CE Marking Directive 93/68/EEC.

### **Liberty Printer - Model CDPR3**

#### **Notice for USA**

Tested to Comply with FCC Standards FOR HOME OR OFFICE USE.



This device complies with part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) This device may not cause harmful interference, and (2) this device must accept any interference received, including interference that may cause undesired operation. Any unauthorized modification to this equipment may result in the revocation by the FCC of the user's authority to operate this equipment.

This product contains a radio transmitter FCC ID: QT5-RFID1. This product complies with  $\underline{UL~60950~3^{rd}~Edition}$ .

#### **Notice for Canada**

This Class B digital apparatus complies with Canadian <u>ICES-003</u>. Cet appareil numerique de la classe B est conforme a la norme NMB-003 du Canada.

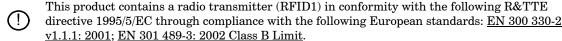
This product contains a radio transmitter IC: 4496A-RFID1 in conformance with <u>RSS-210:</u> <u>Issue 5: 2001</u>. The term "IC" before the radio certification number only signifies that Industry Canada Technical specifications were met.

This product complies with  $\underline{\text{CAN/CSA-C22.2 No. } 609}50\text{-}00\ 3^{\text{rd}}}$  Edition.

#### **Notice for Europe**



This product is in conformity with the EMC Directive (89/336/EEC) and the Low-Voltage Directive (73/23/EEC) through compliance with the following European standards: EN 55022: 1998 + Amd. 1: 2000 Class B Limit; EN 55024; EN 60950. The CE mark has been affixed in accordance with the CE Marking Directive 93/68/EEC.





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#### Record of Revisions—PN 110715-000

Revision	Date	Description
C	06/26/03	Changed printer driver installation directions for new driver.
		Changed "Align Cartridge" to "Center Image" on page 48.
D	09/03/03	Added copy disc disclaimer and a warning about using too much force may damage the black ink cartridge. Computer Specifications changed on page <u>57</u> .

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#### **LIMITED** 1-Year Warranty

Rimage warrants, to the original end user only, that all non-consumable parts of the Rimage Desktop 4500 products will be free from defects in material and workmanship for 12 months, according to the following terms:

- Rimage will replace or repair, at Rimage's discretion, any non-consumable parts found defective within the Warranty period.
- Valid from the date Rimage ships the product to you.
- Factory depot repair to Rimage Minnesota or Rimage Germany with a typical response of 15 business days (25 business days for International). On-site repair, Advanced Replacement, or faster response Maintenance Contracts are available for an additional fee.
- Rimage will pay ground service freight charges for components shipped to you.

The use of non-Rimage ink cartridges or refilling of ink cartridges voids the equipment warranty or maintenance coverage. Any applicable ink cartridge warranty shall not apply to Rimage ink cartridges that have been refilled, remanufactured, refurbished, misused, or tampered with in any way.

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- Shipment costs of equipment or components returned to the Rimage factory.
- Software and/or firmware enhancements released after purchase of the product.
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To check order shipment information, return goods data, shipping details, or tracking specifics on the Rimage web site go to www.rimage.com and select **Order Status**.

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### **Safety Precautions**

This manual and the indications on the product allow proper and safe operation. The indication marks below help protect you and other persons from injury, and equipment from damage. To ensure safety, please read the precautions in the online User Guide manual and familiarize yourself with their meaning before using the equipment.



Warning! Ignoring this symbol and performing wrong operation may cause death or severe injury.



Caution Ignoring this symbol and performing wrong operation may cause bodily harm or equipment damage.

#### **WARNING:**



The laser beam used by this CD Recorder is a Class 1 laser and may be harmful to the eyes. Do not attempt to open the recorder. An authorized field technician should perform all service procedures.

#### **CAUTION:**



For continued protection against risk of fire, replace the fuse only with same type and rating. An authorized field technician should perform all service procedures.

#### **WARNING:**



Ink may be harmful if swallowed. Avoid contact with eyes. Ink contains nitrites. If ingested, seek immediate medical attention. Keep out of reach of children.

### Chapter 1 – Overview

### **Overview**

This manual provides the information needed to unpack, install, and operate the Desktop 4500 autoloader and Liberty printer. The Desktop 4500 consists of an autoloader that can move discs from a three-bin carousel to recorders, and a printer, all integrated into one machine. The three-bin carousel has a capacity of 120 discs and may be loaded or unloaded without interrupting the current order. The Desktop 4500 works in conjunction with Rimage OfficeNet Software running on Windows 2000 or XP.

For a basic overview of the Desktop 4500 parts, go to page 32.

### **Box Contents**

After all the boxes are opened and the components are removed, you can use the check boxes to check off the included components:

#### Desktop 4500:

- ☐ Rimage Desktop 4500 Installation and User Guide
- □ Rimage OfficeNet Software Suite
- □ AC Power Cord
- □ Autoloader Control Cable
- □ Firewire Cable
- □ USB Cable
- ☐ IEEE 1394 (Firewire) Host Adapter Card
- □ Software Activation Card
- □ 3-Bin Carousel
- □ Desktop QuickStart Directions
- □ Software Suite 6 Install Guide
- □ Software Suite 6 Getting Started Guide

#### Printer:

- □ Liberty Printer
- □ Color Ink Cartridge
- □ Black Ink Cartridge

#### Computer:

These parts are included **only** if a computer was ordered with the autoloader.

- Computer
- □ Monitor
- Keyboard
- Mouse and mouse pad
- □ Two AC Power Cords

Inspect the shipping boxes before installing the hardware. Contact your reseller or Rimage Corporation if items are missing or damaged.

#### **Next Step**

If the Desktop system came with a computer (PC), go to the "Install Carousel" section on page 9. If the Desktop 4500 did not come with a computer, start at "Setup Computer" on page 8.

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### Chapter 2 - Installation

## Setup Computer

If a Rimage Control Center (PC) came with your system, the software is already installed. Go to the "Desktop 4500 Setup" section on page 10. If the system did not come with a computer, the following procedures describe how to configure a computer for the Desktop 4500 autoloader. The computer must meet certain specifications in order to handle two to four recorders and the printing process. Refer to the "Computer Specifications" on page 57.

### **Install Computer Hardware**

If you are not familiar with installing adaptor cards or hard drives in a computer, request help from your company's network administrator.

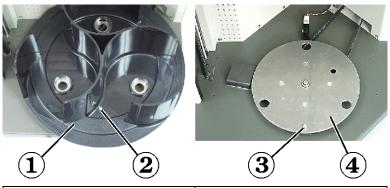
- 1. Power off the computer power.
- 2. Remove the computer's cover.
- 3. Install the IEEE 1394 (Firewire) host adapter card in one of the card slots, unless your computer has one included.



- 4. If using the recommended computer specifications on page 57, install the recommended SCSI Hard drive Controller in one of the card slots.
- 5. Install the recommended hard drives.
- 6. Connect all hard drives to the appropriate hard drive controller.
  - A hard drive is recommended for every two recorders. Tremendously improves performance when recording each disc as a unique disc image. Disabling the power management features to prevent underrun errors is recommended.
- 7. Format the cache hard drives as a **Basic Disk** with **NTFS** file system. Refer to Windows online help, or get help from your network administrator. Do **NOT** install the Rimage software until instructed!

## Install Carousel

- 1. Place the carousel on the carousel platter so the alignment hole is aligned with the alignment pin.
- 2. Press the carousel down firmly.
- 3. Go to the "Desktop 4500 Setup" on page 10.



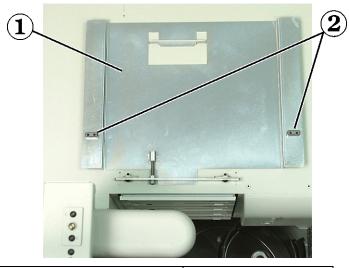
1 – Carousel	3 – Alignment Pin
2 – Alignment Hole	4 – Carousel Platter

## Desktop 4500 Setup

Proceed through the following directions to set up your system. You may need a 5/32" Allen wrench and a T10 Torx screwdriver to align the printer.

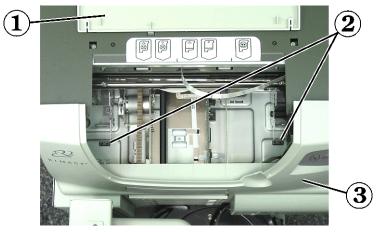
### **Install Printer**

The following procedure explains how to install the Liberty printer on the Desktop 4500. The Desktop 4500 includes two alignment blocks on the printer adjustment plate to hold and position the printer.



1 – Printer Adjustment Plate 2 – Alignment Blocks

1. Open the printer top cover and place the Liberty printer on the printer adjustment plate so the alignment slots slide over the alignment blocks. The picture below shows the alignment blocks coming up through the alignment slots located at the bottom of the printer. Make sure the printer is pressed down so the blocks protrude through the hole openings.



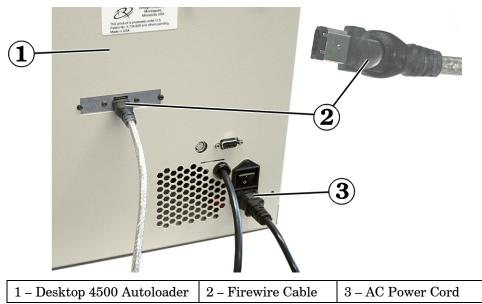
1 – Printer Top Cover 2 – Alignment Blocks 3 – Liberty Printer

- 2. Close the printer top cover.
- 3. Go to the "Connect Cables" section on page 11.

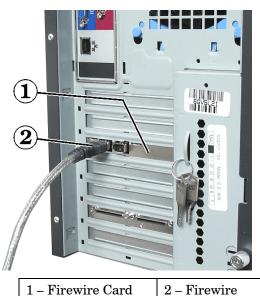
### **Connect Cables**

The Desktop 4500 and the Liberty printer require one AC outlet. The PC requires two AC outlets. The Desktop 4500 and Liberty printer features a universal power supply that automatically switches between 120 and 220 Volts. The recorders in the Desktop 4500 are controlled through a Firewire host adapter card. Before connecting the cables, the PC should have the Firewire card installed.

- 1. Do **NOT** power on the Desktop system after connecting the cables!
- 2. Connect the AC power cord to the autoloader.
- 3. Connect one end of the Firewire cable to the connector as shown on the rear of the Desktop 4500 autoloader.



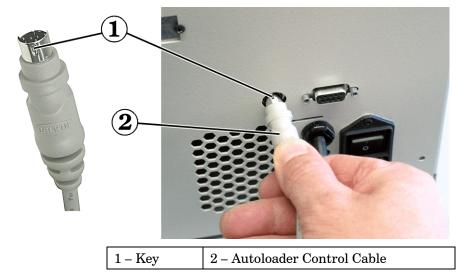
4. Connect the opposite end of the Firewire cable to the Firewire card on the PC. Either Firewire connection will work. Your computer may not look like this one, but the Firewire card is the same.



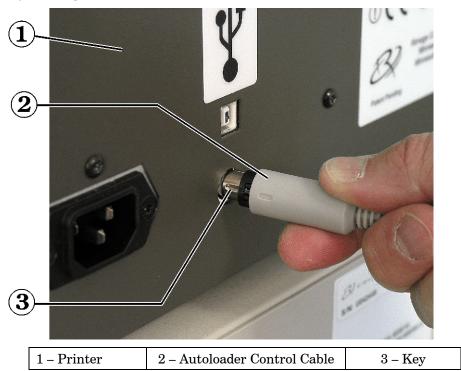
1 - Firewire Card

11

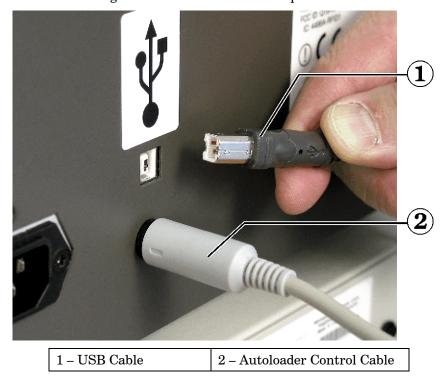
5. Connect one end of the autoloader control cable to the rear of the autoloader so the key of the autoloader control cable is facing up as shown in the picture on the right side.



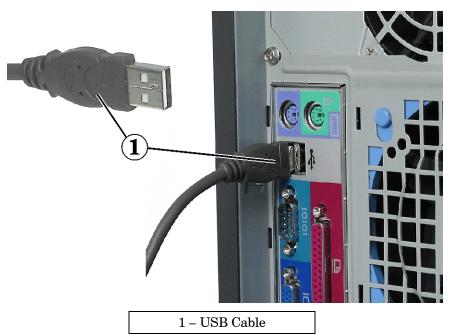
6. Connect the opposite end of the autoloader control cable to the Liberty printer so the key is facing to the left as shown here.



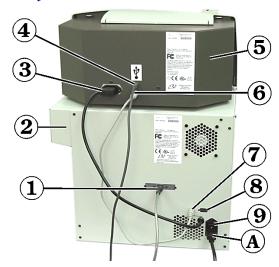
7. Connect the matching end of the USB cable to the printer.



8. Connect the other end of the USB cable to the USB connection on the PC.



- 9. Connect the printer power cord from the autoloader to the printer.
- 10. Check all the cable connections as shown in the picture below. Remember, do NOT power on the Desktop system until instructed.
- 11. Connect all remaining cables to the monitor, mouse, keyboard, and the AC power cords.
- 12. If your system came with a PC, go to "Install Ink Cartridges" section on page 22.
- 13. Go to the "Install Liberty Printer Driver" section next.



1 – Firewire Cable	5 – Liberty Printer	9 – AC Power Switch
2 – Autoloader	6 – Autoloader Control Cable	A – AC Power Cord
3 – Printer Power Cord	7 – Autoloader Control Cable	
4 – USB Cable	8 – Serial Port (not used)	

### **Install Liberty Printer Driver**

To install the Liberty Printer Driver, you must be logged on as a member of the Administrators group. Do not install the Liberty Printer Driver with the printer powered on! Install the driver before the printer is powered on. Do not install the Rimage OfficeNet Software Suite until instructed!

Make sure the system is powered **off** by the Power Switch on the autoloader. If the Liberty printer was connected to the PC and powered on when the PC started, reboot the PC.



To install the printer driver on Windows XP, go to page 17.

To install the printer driver on Windows 2000, go to the next section.

#### **Install Printer Driver on Windows 2000**

- 1. Insert the OfficeNet Software Suite disc in the CD-ROM drive.
- 2. An MSI prompt may appear as below. Select  $\mathbf{OK}$  and the software will repair itself. If it does not appear, go to step 5.



- 3. When the Windows Installer is complete, select **OK**.
- 4. Select **Yes** to reboot the computer.



- 5. If the OfficeNet software installation starts, **cancel** the installation process. The printer driver must be installed first.
- 6. Select Windows **Start** menu and select **Run**.
- 7. Use the **Browse** button to select the *Liberty\_setup.exe* file in the root of the OfficeNet Software Suite disc and select **Open**. If your Windows is not configured to see the file extensions, you will just see *Liberty Setup*.

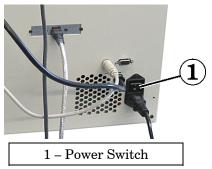


8. Select **OK** to start the driver installation.

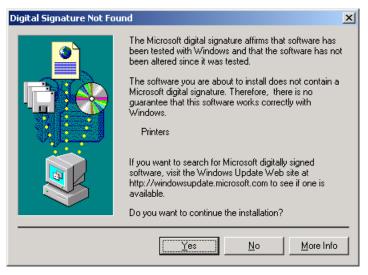
9. A "Digital Signature Not Found" dialog displays, indicating that the driver is not signed, select **Yes** to continue.



10. After the Digital Signature Not Found window closes, apply power to your printer by switching the power switch on the back of the autoloader.

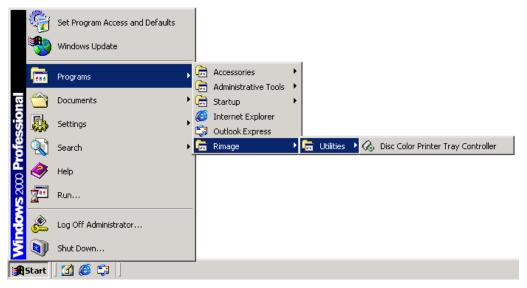


11. After the files are installed, a second dialog displays as shown. Select **Yes** to continue.



12. Several dialogs appear indicating that the driver files are being installed. The Liberty Printer Driver installation is complete.

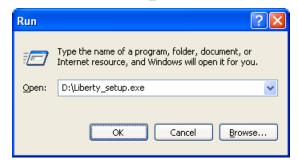
13. Use Windows' **Start|Programs|Rimage|Utilities|Disc Color Tray Controller** to start the Rimage Tray Controller. The tray controller is used with the printer driver to move the printer tray in and out.



14. Go to the "Install Ink Cartridges" section on page 22.

### **Install Printer Driver on Windows XP**

- 1. Insert the OfficeNet Software Suite disc in the CD-ROM drive.
- 2. If the OfficeNet software installation starts, **cancel** the installation process. The printer driver must be installed first.
- 3. Select Windows Start menu and select Run.
- 4. Use the **Browse** button to select the *Liberty\_setup.exe* file in the root of the OfficeNet Software Suite disc and select **Open**. If Windows is not configured to see file extensions, you will just see *Liberty Setup*.

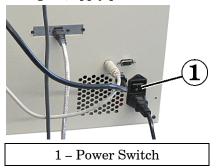


5. Select OK.

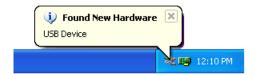
6. When the Windows Logo testing dialog box appears as shown, select **Continue Anyway**.



- 7. When a second Windows Logo testing dialog window appears, select **Continue Anyway.**
- 8. When the all prompts are gone, apply power to the autoloader.



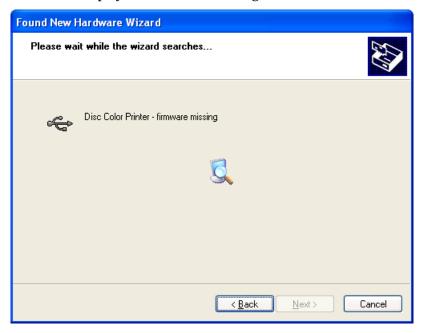
Several devices are found and displayed in the icon tray area.



9. When the Found New Hardware Wizard window displays, select Next.



The next window displays the wizard searching for files.



10. The next window displays "Disc Color Printer – Firmware missing". This is normal for this printer since it automatically loads the latest firmware from the PC after the driver is installed. Select **Continue Anyway**.



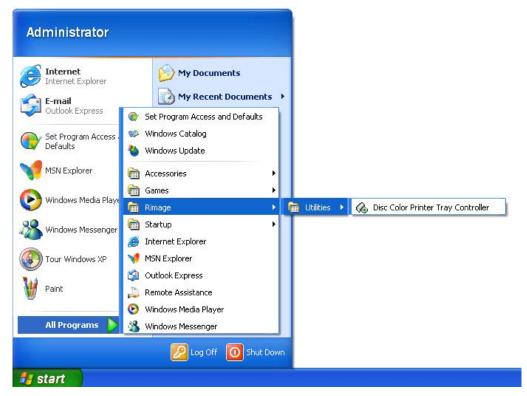
11. Select Finish.



- 12. The prior steps (9-11) are repeated three more times (once for each of the Plug and Play components related to this Printer Driver). The following driver names are installed in the following sequence:
  - a. Disc Color Printer TCH
  - b. Disc Color Printer LDR
  - c. Rimage Disc Color Printer

After the last driver is installed, a message appears in the icon tray area indicating the hardware is installed and is ready to use.

13. Use Windows' **Start|All Programs|Rimage|Utilities|Disc Color Tray Controller** to start the Rimage Tray Controller. The tray controller is used with the printer driver to move the printer tray in and out.

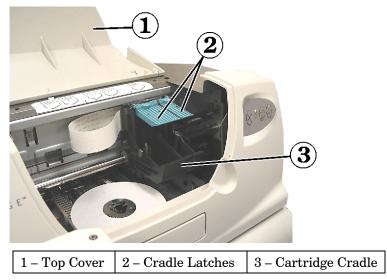


14. Go to the "Install Ink Cartridges" section on page 22.

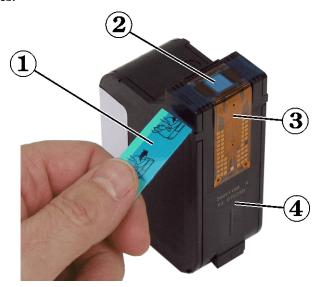
### **Install Ink Cartridges**

The printer is shipped without ink cartridges installed. Before installing the ink cartridges in the Liberty printer, allow the cartridge to reach room temperature before installing it. Store ink cartridges at a temperature between  $50-90^{\circ}F$  ( $10-32^{\circ}C$ ) and avoid moisture and direct sunlight.

1. With the power still on, open the top cover. The ink cartridge cradle moves into position to install the ink cartridges.



- 2. Raise the cradle latches.
- 3. Remove each ink cartridge from its packaging.
- 4. Carefully remove the plastic tape. Hold the ink cartridge so that the copper strip is on the bottom (see below). Do not remove the copper strips and do **Not** touch the ink nozzles!



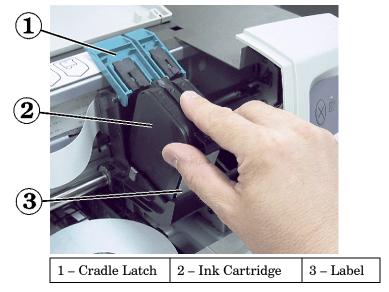
1 – Plastic Tape	2 – Ink Nozzles	3 – Copper Strip	4 – Ink Cartridge
		o copper strip	

5. Install the ink cartridge into the cartridge cradle so the label is facing toward you.



Caution:

The black ink cartridge can be damaged when installing it in the printer. Use minimal force when installing the Ink cartridge; it takes little pressure to install an ink cartridge.



6. Push the ink cartridge firmly into position and secure the cradle latch.



- 7. Install the other ink cartridge using the same procedure.
- 8. Close the top cover.

For best prints, the cartridges must be aligned after installation or replacement. For more information about cartridge alignment, see "Align Ink Cartridges" section next.

### Align Ink Cartridges

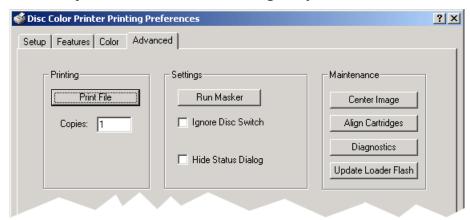
For optimal print quality, align the ink cartridges using the steps below.

- 1. Windows 2000 Select the Windows Start button and select Settings | Printers. Windows XP Select the Windows Start button and select Printers and Faxes.
- 2. Right-click on the **Disc Color Printer** and select **Printing Preferences** from the drop-down menu.

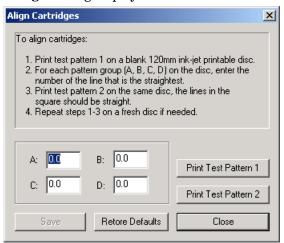
- 3. Select the **Advanced** tab.
- 4. Select the Align Cartridges button.

If the buttons are grayed out, the tray controller must be started. For Windows 2000, select Windows' **Start|Programs|Rimage|Utilities|Disc Color Tray Controller** to start the Rimage Tray Controller.

For Windows XP, select Windows' **Start | All Programs | Rimage | Utilities | Disc Color Tray Controller** to start the Rimage Tray Controller.



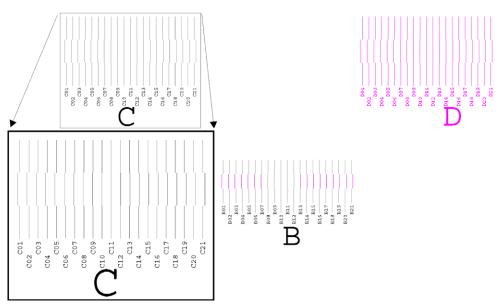
The Align Cartridges dialog displays.



- 5. Select the **Print Test Pattern 1** button and the printer tray comes out.
- 6. Place an inkjet printable disc on the printer tray.

7. When prompted, press the disc button on the printer to close the tray and start the printing test.

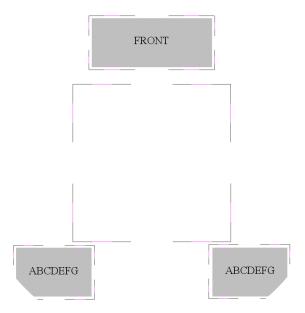




- 8. There are four pattern groups (A, B, C, D) printed on the disc. Each group has a numbered index, shown as a set of numbers from 1 to 21. Locate the two lines that make the straightest line and enter the matching index value for each lettered group. You may enter decimal values if the lines are not exactly aligned.
- 9. In the above example, looking at group A, the straightest lines are at A11. Enter 11 in the group A field. In group C, the straightest lines are at C11. Enter the remaining groups and select **Save.**
- 10. Place a disc on the printer tray and select the **Print Test Pattern 2** button.

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11. When prompted, press the Disc button to print the following test pattern on a disc.



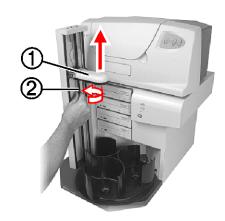
- 12. The black and magenta lines should be straight as shown above. If they are not inline with each other, repeat the alignment process starting at step 5.
- 13. Close the Align Cartridges window.
- 14. Close the Printing Preference window.
- 15. Select the Disc button to close the printer tray. If the printer tray does not close, close the tray controller application and open it again. Wait for the tray controller to initialize, about 60 seconds, and press the Disc button to close the tray.
- 16. If you are installing the equipment, go to step 4 of the "Check Printer Tray Alignment to the Picker" section, to complete installation.

### **Check Printer Tray Alignment to the Picker**

For the Desktop 4500 autoloader to operate with the printer, the printer tray must be aligned to the picker. The printer adjustment plate is factory adjusted but it may move after shipment. Therefore, it may be necessary to check the printer alignment after installation. All of the cables must be connected and the Liberty Printer Driver and Tray Controller application must be installed before performing this procedure. The Tray Controller is installed when the printer driver was installed.

#### **Required Tools**

- T10 Torx screwdriver
- 5/32" Allen wrench
- Disc
- 1. Power on the Desktop 4500 and the PC if you have not already done so.
- 2. Log on if you have not already done so.
- 3. If the connected PC has the Rimage OfficeNet Software Suite installed, wait for the Production Server to complete the configuration process before aligning the printer tray. If the Software Registration screen appears, select **Cancel**.
  - Close the Production Server application if it is running.
- 4. Rotate the leadscrew clockwise to move the picker to the top of the picker column.



1 – Picker 2 – Leadscrew

5. Press a disc into the picker as shown.



6. Press the Disc button and the printer tray comes out. If the tray does not come out, go to page 31 for help.



7. Manually rotate the leadscrew counterclockwise to lower the picker down to the printer tray. The leadscrew can only be rotated if the picker motor is not energized. Do not press the operator button on the autoloader! If the leadscrew cannot be rotated, refer to "Releasing Picker Motor Energy" section on page 31.

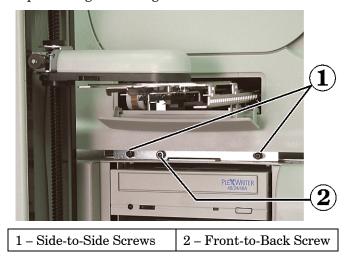
If the printer tray was moved during the alignment, you must run the tray in and out again.



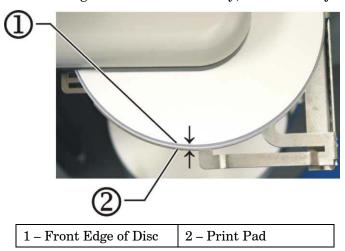
8. If the picker fingers are not centered over the hole of the disc, alignment is necessary.

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- 9. If the printer needs to move left or right, loosen the side-to-side screws (T10) and move the printer until the picker fingers are centered over the hole.
- 10. If the printer needs to move forward or backwards, turn the front-to-back screw (5/32" Allen screw) counterclockwise to move the printer back, or clockwise to move it forward so the picker fingers are aligned over the hole.



- 11. With the picker fingers centered over the hole, rotate the leadscrew counterclockwise to move the picker into the hole. The disc should snap into the picker fingers. With the disc held by the picker, finer adjustments can now be made.
- 12. Move the printer so the right edge of the disc matches the right edge of the print pad. After the side-to-side adjustment is complete, tighten the side-to-side screws.
- 13. Move the printer with the front-to-back screw so the front edge of the disc is about 0.040"/1mm from the front edge of the print pad. Make sure you are aligning to the front edge of the disc, not the coating on the disc. If necessary, make final adjustments.



14. Rotate the leadscrew counterclockwise to move the picker up from the printer tray.



15. Press the disc button to close the tray. If the printer tray does not close, close the tray controller application and open it again. Wait for the tray controller to initialize, about 60 seconds, and press the disc button to close the tray.



16. Remove the disc from the picker fingers by pulling the disc down from the picker.



- 17. If you were required to release the picker motor energy by using the operator button, press the operator button nine times and hold on the ninth press. The Mode LED will go off and you can release the button.
- 18. If a PC was not shipped with the Desktop 4500, refer to the *Software Suite 6 Install Guide* to install the OfficeNet Software Suite.

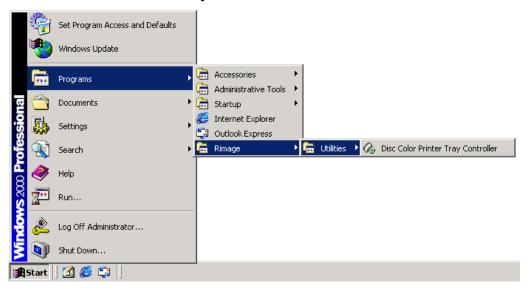
You can refer to pages 32 through 57 for the user guide information for the Desktop 4500 autoloader and Liberty printer.

### **Tray Controller Help**

This section is a helpful procedure if the printer tray did not come out after pressing the disc button.

- 1. Make sure the USB cable is plugged in at the printer and the PC.
- 2. Make sure the tray controller application is running. This is seen in the icon tray as shown here.

- 3. Make sure the tray controller application has finished initializing, by double-clicking on the tray controller icon.
- 4. Check for the status. If the status is OK and there are no error messages in the tray controller application, close the tray controller application and unplug the USB cable from the printer.
- 5. Plug the USB cable back in the printer.
- 6. Select the windows **Start** menu and select |**Programs**|**Rimage**|**Utilities**| and select **Disc Color Printer Tray Controller**.



7. After the tray controller has completed the initialization, try opening the printer tray again by pressing the disc button. If you came from the printer alignment process, return to page 28.

### Releasing Picker Motor Energy

This section is a helpful reference to the installation process on page 28.

- 1. Press and hold the operator button for about eight seconds. When the <u>mode LED</u> and <u>button LED</u> are lit, it indicates you can release the button.
- 2. Press the operator button six times and hold on the last press to release the picker motor energy. Return to page 28 to complete the alignment process.

### Chapter 3 – User Guide

## Desktop 4500 Parts

This section identifies the Desktop 4500 parts. The Desktop 4500 has several major functional parts: the Carousel, the Disc Recorders, the Liberty printer, and the Operator Panel.

### **Front View**



1 – Picker	4 – Printer Control Panel	7 – Operator Panel
2 – Tower	5 – Liberty Printer	8 – Recorder
3 – Printer Top Cover	6 – Printer Tray Door	9 – Carousel

### **Liberty Printer**

The Rimage Liberty printer is a flexible, cost-effective inkjet printer for use in a standalone or Rimage system application. Capable of color or black printing, the Liberty printer uses special ink cartridges intended for CD and DVD printing.

The Liberty can print laser-quality black text, plus professional color photos, at up to 4800-optimized DPI (with  $1200 \times 1200$  DPI input resolution) on 120 mm CD and DVD discs with ink-jet receptive coatings. Liberty also features controlled ink drop placement for faster operation and optimized color resolution. A single ink cartridge will print about 300-500 full discs depending on print mode and image complexity. Partial disc coverage extends cartridge capacity.

#### Carousel

The Carousel, located at the bottom of the Desktop 4500 contains three bins and each bin can hold up to 60 discs. Discs may vary in thickness.

#### Disc Recorders

The Desktop 4500 models can accommodate up to four CD or DVD recorders or a combination of two CD and two DVD recorders.

### **Operator Panel**

The Desktop 4500 has an Operator Panel located on the right side of the autoloader. The following Status Lights (LEDs) provide you with operational information.

#### **Power LED**

The green Power LED lights whenever the power switch is on.

#### Active LED

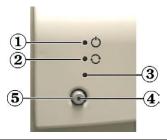
The yellow Active LED lights when there is communication through the autoloader control port.

#### Mode LED

The yellow Mode LED lights when the button diagnostic function is selected.

#### **Button LED**

The yellow Button LED, located in the operator button, is lit when the autoloader is paused. It may also be lit during the button diagnostics. Directions for the Desktop 4500 button diagnostics may be downloaded from the service procedures on the Rimage Technical Web site.



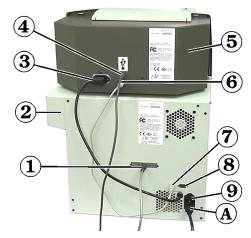
1 – Power LED	3 – Mode LED	5 – Operator Button
2 – Active LED	4 – Button LED	

### **Operator Button**

The operator button may be used to pause the Desktop 4500 from processing discs. Pausing the autoloader is used so the operator can add and remove discs from carousel, or change ink cartridges. The carousel rotates each time the operator pauses the autoloader. To pause the Desktop 4500, press the operator button. To return to normal operation mode, press the operator button again. When the button LED is on and the mode LED is off, the autoloader is in the paused mode.

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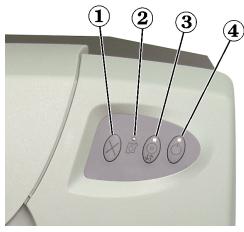
## **Rear View**



1 – Firewire Cable	5 – Liberty Printer	9 – AC Power Switch
2 – Autoloader	6 – Autoloader Control Cable	A – AC Power Cord
3 – Printer Power Cord	7 – Autoloader Control Cable	
4 – USB Cable	8 – Serial Port (not used)	

### **Liberty Operator Panel**

The Liberty printer operator panel has three buttons and four LEDs to indicate certain conditions.



1 – Cancel Button	3 – Disc Button and LED
2 – Ink Cartridge Status LED	4 – Power Button and LED



Cancel Button: Not used.



**Ink Cartridge Status LED**: Flashes when an ink cartridge is low on ink, incorrectly installed, or when the printer cover is open. To check the ink cartridge status, refer to "Ink Cartridge Status" on page 41.



**Disc Button and LED**: The Disc button is used to move the tray in and out, and to load a disc for manual printing used in testing alignments. The Disc LED shows the status if a disc is on the tray: lit to indicate a disc is present, off for disc absent.



**Power Button and LED**: The Power button is unused, as the printer is either on, or in Sleep mode (as controlled by the printer driver). The Power LED flashes when the printer is printing, or it indicates it is in an error state. Error conditions may be viewed at the Production Server, or in the <u>status field</u> inside the printer driver under the advanced tab.

## **User Operations**

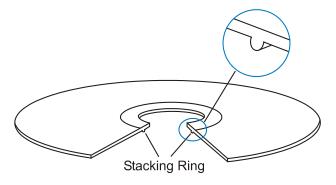
The user of the Desktop 4500 fills the carousel with blank discs, removes the completed discs, and changes ink cartridges. Other user operations are performed in the software. Refer to the *Software Suite 6 Getting Started Guide* and Online Helps.

### **Loading Discs**

Discs may be loaded with the carousel installed or removed from the Desktop 4500. When loading discs, make sure the recording side is facing down. The carousel bins may be configured in the Production Server as input bins or output bins. To add more discs or remove completed discs when an order is in process, refer to the "Reloading Discs" section on the next page.

### **Handling CDs**

Hold the discs by the outer edge so you do not put fingerprints on either the top or bottom surfaces. Fingerprints on the top can affect printing. It is recommended to wear lint-free gloves. Place discs in the supply bin with the print side facing up. Most discs have an extruded stacking ring (see next figure) that identifies the bottom of the disc. Some DVD-R discs may have a stacking ring on both sides. The recording side has a shiny surface and the print side has a matte surface.



### **Bin Configuration**

Bins 1 and 2 are configured as the default supply and output bins. The Desktop 4500 starts picking unrecorded discs from bin 2 and places the completed and failed discs into bin 3. When Bin 2 is empty, it picks discs from bin 1 and places them into bin 2. When removing the completed discs, the reject discs should be removed from the completed discs. The rejects should have a reject label printed on the disc unless that function was disabled in the Production Server options. Refer to the Reject Pattern Printing options located in the Printing Parameters of the Production Server.

Another option is to configure the bins so there is one input bin, one output bin and one reject bin. Refer to the Production Server online help file for directions.

# **Reloading Discs**

The carousel may be reloaded at the time it runs out of discs, or it may be reloaded while discs are recording. To reload while orders are still in process, pause the Desktop 4500 by pressing the operator button. The carousel may be manually rotated to reload discs in the bins.

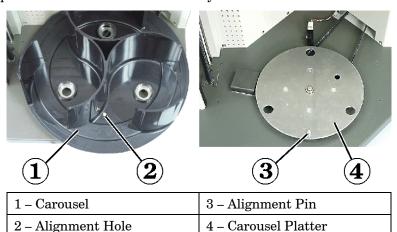
- 1. If an order is in process, pause the Desktop 4500 by pressing the operator button.
- 2. Manually remove the carousel and remove any completed discs.

The system picks all discs from the supply bins and places the completed discs in the output bins. Output bins are configured at the Production Server and may be viewed in the Production Server Parameters. Each bin is numbered on the carousel. Rejected discs may be dispersed in the output bins and may be identified by a reject label. The system will print a reject label if the Production Server is configured to print a reject label. Refer to the Reject Pattern Printing options located in the Printing Parameters.

- 3. Place discs to be recorded in the input bin(s) of the carousel. Bin #2 may be either input or output, depending on how the Production Server software is configured. Fill bin 2 if required.
- 4. At the Production Server, select **Reset Input Bin** in the **Options** menu. The supply and output bin status will be rechecked by the Production Server.
- Press the operator button to resume operation.
   The button LED should be off, to process discs.

# **Installing the Carousel**

Place the carousel on the carousel platter so the alignment hole is aligned with the alignment pin. Press the carousel down firmly.



# **Label Design Requirements**

This section provides some things you need to consider before you create a label. Your first consideration is the media you will use. Select media that has an ink printable surface.

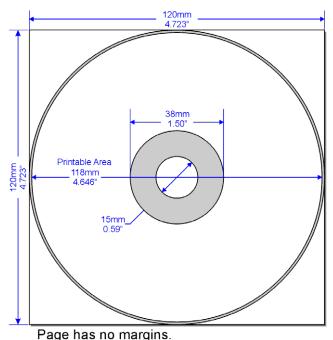
The OfficeNet software comes with a label editor called "CD Designer" which is installed on your system. Use CD Designer to design your labels.

If you have another software application that you prefer, you can create the label image and output it as an Acrobat (.pdf) file, or you can output a Windows bitmap (.bmp) file. The Acrobat file can print directly to the Liberty through the Rimage software. If you output a Windows bitmap file, insert it into CD Designer to create a label that prints with the Rimage software. To create a label with another program, use the following criteria when creating a label:

**Color Depth:** Save the artwork for the label with the color set to at least 256 colors; a higher color setting is recommended.

**DPI:** Use pictures or logos set to 300 DPI (Dots Per Inch).

**Label Design Size:** A full size disc is 120mm (4.723") with a hub size that is 38mm (1.5"). The actual printable area is around 118mm (4.65"). The printable area and hub sizes vary depending on the disc manufacturer. The hole is 15mm (0.59").



You can mask the outer non-printable area and hub area so it does not print in these areas. Set parameters in the Run Masker section of the printer driver. Refer to page 47.

### **Media Requirements**

Discs must be coated with a surface designed for ink-jet printing. Recommended ink-jet printable discs are listed on the Rimage Web site.

# Replace Ink Cartridge

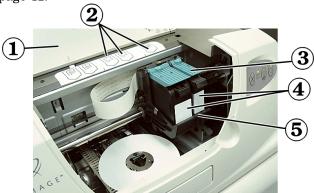
When one of the ink cartridges requires replacement, use the Production Server software, or use the operator button to pause the processing of orders. The Liberty printer uses the following ink cartridges:

Ink Cartridge	Rimage Part Number
Black (Single Cartridge)	210755-001
12 Pack of Black Cartridges	210764-001
Color (Single Cartridge)	210753-001
10 Pack of Color Cartridges	210765-001



Note: You can only use authentic Rimage ink cartridges in the Liberty printer.

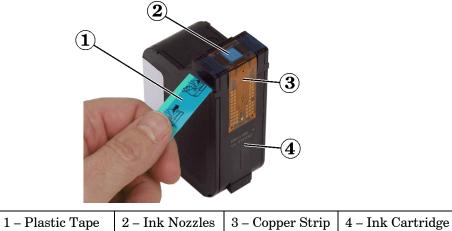
- 1. Press the operator button to pause the autoloader.
- 2. Open the top cover of the printer. The ink cartridge cradle moves to one of the cartridge status positions. For information on Status Positions, see "Ink Cartridge Status" on page 41.



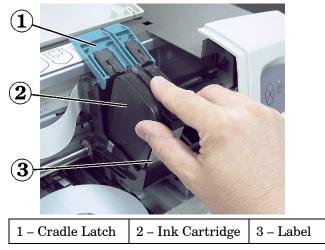
1 – Top Cover	3 – Cradle Latch	5 – Ink Cartridge Cradle
2 – Status Positions	4 – Ink Cartridges	

- 3. Raise the cradle latch.
- 4. Lift the ink cartridge out of the ink cartridge cradle.
- 5. Remove the ink cartridge from the box.

6. Carefully remove the plastic tape from the new cartridge. Hold the ink cartridge so you do not touch the copper strip (see below). Do not remove the copper strips and do **Not** touch the ink nozzles!



7. Install the ink cartridge into the cartridge cradle so the label is facing toward you.



- 8. Push the ink cartridge firmly into position and close the cradle latch.
- 9. Close the top cover.
- 10. For best prints, the cartridges must aligned after replacing a cartridge. For more information about cartridge alignment, see "Align Ink Cartridges" section on page 23.
- 11. Press the autoloader's operator button to resume operation. The LED inside the operator button should be off after pressing the operator button.

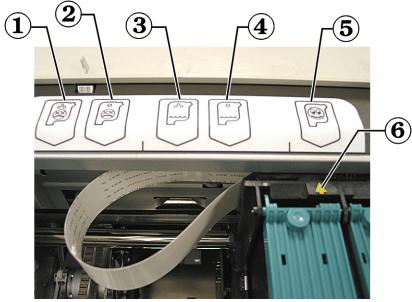


### Warning

- Ink may be harmful if swallowed.
- Avoid contact with eyes.
- Ink contains nitrites. If ingested, seek immediate medical attention.
- Keep out of reach of children.
- Refilling ink cartridges may result in damage to the cartridge or printer.
- Rimage ink cartridges are not licensed for modification.

# **Ink Cartridge Status**

When the top cover is open, the ink cartridge cradle moves so that its arrow points to one of the ink cartridge status indicators, indicating the cartridge status as shown below



1 – Color Ink Cartridge Trouble	4 – Black Ink Cartridge Low
2 – Black Ink Cartridge Trouble	5 – Ink Cartridges Normal
3 – Color Ink Cartridge Low	6 – Status Indicator Arrow

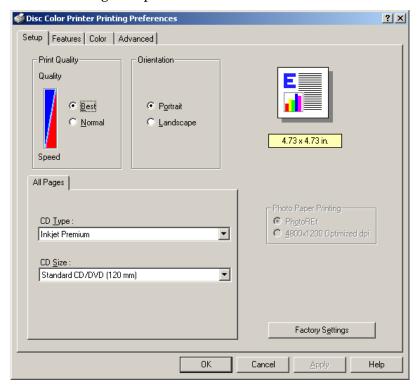
In the figure above, the Status Indicator Arrow is pointing to the Normal status indicator. Refer to the "Advanced Tab" section on page 45 of this manual for additional problem solving information.

# Change Printer Driver Settings

You can change the printer driver properties to select print quality, print orientation, ink volume, or other image adjustments.

You can right-click and select What's This? for more information on any topic.

- 1. On the Start menu, point to Settings, and then click Printers.
- 2. Right-click the printer you want to change on the shortcut menu, and then click **Printing Preferences**. The Liberty **Disc Color Printer Printing Preferences** dialog box opens.



3. At the **Setup** tab, select the **Print Quality** (**Best** or **Normal**) and select the **Orientation** (**Portrait** or **Landscape**).

**Best** quality produces the highest print quality and can eliminate the 'banding' effect that sometimes occurs in solid print areas. However, **Best** quality prints slower than **Normal** quality for most applications.

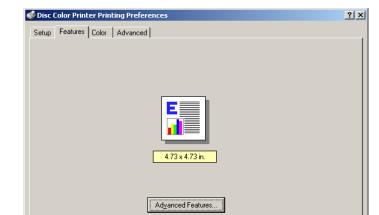
**Normal** quality delivers high-quality output at a faster print rate.

**Portrait** orientation prints the label vertically so the top of the label comes out of the printer first. **Landscape** orientation prints the label horizontally so the top of the label is located on the side of the printer tray.

Select the CD Type (Inkjet Premium or Plain) and CD Size (Standard CD/DVD (120 mm).

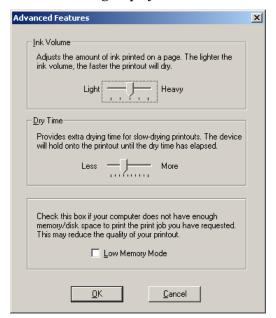
Select Factory Settings to return all settings to their factory default settings.

4. Select the **Features** tab.



5. Select Advanced Features to open the Advanced Features dialog.

The Advanced Features dialog displays.



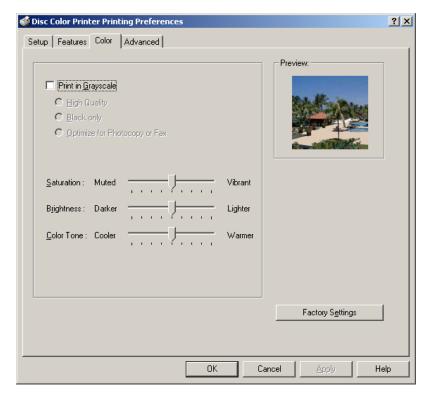
Cancel

Help

6. Adjust the **Ink Volume** if desired. Drag the slider to the left for lighter images (less ink) or to the right for denser images (more ink). Select **OK** when done.

The Dry Time and Low Memory Mode selections are not used.

7. Adjust the Color tab settings (Print in Grayscale, Saturation, Brightness, and Color Tone) as needed.

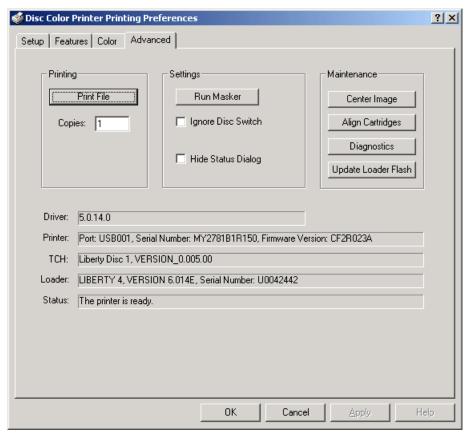


- Print in Grayscale print colors as various shades of gray.
  - High Quality uses the tri-color ink cartridge to print high quality grayscale images.
  - o Black Only uses the black ink cartridge to print in grayscale.
  - Optimize for Photocopy or Fax is not used.
- Saturation adjusts the relative intensity of printed colors from Muted to Vibrant.
- **Brightness** adjusts the lightness or darkness of the printed image.
- Color Tone adjusts the perceived warmth or coolness of printed colors.
- **Factory Settings** returns the Color tab parameter changes to the factory set defaults.

Select **OK** to accept all the changes, or select **Cancel** to ignore the changes.

### **Advanced Tab**

The Advanced tab provides access to diagnostic functions, alignments, and a flash update function. The Advanced tab also displays Liberty status information, including Driver, Printer, TCH, Loader, and Status information.



**Driver** - displays the installed Liberty Printer Driver version number.

**Printer** - displays the port number, serial number, and firmware version of the printer.

TCH (Tray Controller Handler) - displays the Handler name and version number.

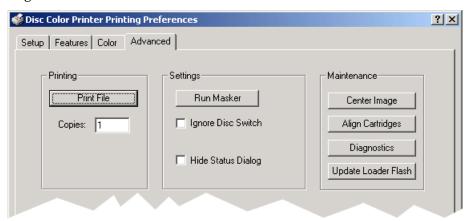
**Loader** - displays the Rimage Desktop autoloader it is physically attached to and the version and serial number of the autoloader. If the Liberty printer displays (Not Attached), the autoloader control cable may not be connected.

Status - displays the current Liberty printer operating status.

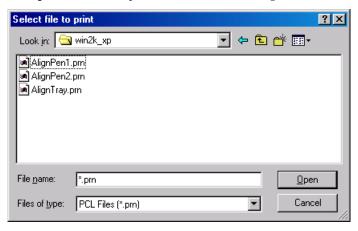
### **Printing**

The Printing section allows you to run a test print without running the complete system. A print file (.prn) must be created prior to running this operation.

1. At the **Printing Preferences** dialog, select the **Advanced** tab to open the following dialog.

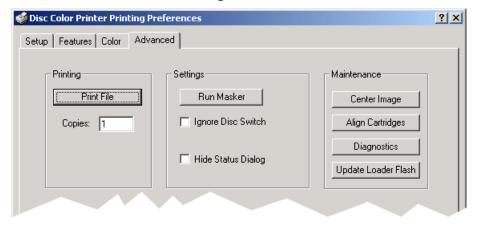


2. Select the **Print File** button and select a pre-rendered file to print for print testing purposes. The file you select must have been prepared for the Liberty printer. The label file will be printed as many times as set in the **Copies** box.



### **Settings**

The Settings selection lets you elect whether to ignore the Disc switch, run the Masker application, and/or hide the Status dialog box.



### **Ignore Disc Switch**

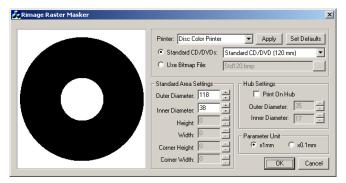
If selected, causes the printer not to wait for the activation of the disc switch before printing. This option is ignored when connected to a Desktop 4500 autoloader.

### **Hide Status Dialog**

If selected, prevents the pop-up status dialog box from opening when a print job is initiated. This option is ignored when connected to a Desktop 4500 autoloader.

#### Run Masker

When selected, the Rimage Raster Masker displays allowing you adjust the mask (non-printable area) settings for the selected media type (**Standard CD/DVD 120 mm** only). This works well when printing rectangle or square pictures on the disc and you do not want the edges printed. If you print on the edges of a disc where there is not printable surface, the ink will smear or run.



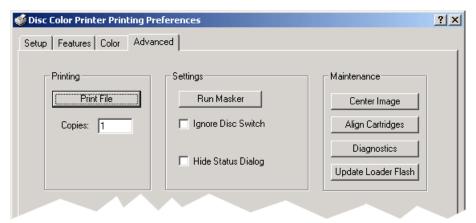
**Standard Area Settings** let you adjust the standard outer and inner diameter settings, etc.

**Hub Settings** lets you select the **Print On Hub** feature and adjust the related outer and inner diameter settings.

**Parameter Unit** lets you switch between a unit of measure of times 1.0 mm or times 0.1 mm.

### Maintenance

The maintenance section allows you to select alignment functions, diagnostics, or update the flash.



**Center Image** – The Center Image function is only required if the print is not centered on the label. Directions are found below.

Align Cartridges - directions are found on page 23.

**Diagnostics** – directions are found on page 48.

**Update Loader Flash** – Rimage recommends using the Production Server to update the autoloader flash firmware. Refer to page 51.

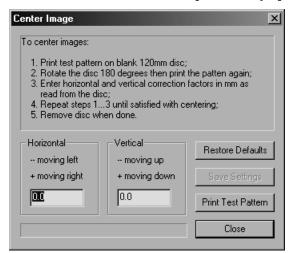
### **Center Image**

This function is used only when the printed label is not centered on the disc.

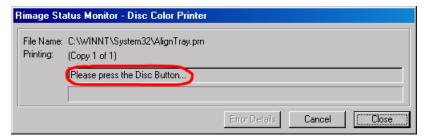
- 1. Stop all orders from processing. You can press the operator button on the Desktop autoloader or pause orders from the Production Server software.
- 2. Select the windows **Start** menu and select | **Settings** | **Printers** |.
- 3. Right-click on **Disc Color Printer** and select **Printing Preferences**.
- 4. Select the **Advanced** tab and select the **Center Image** button.



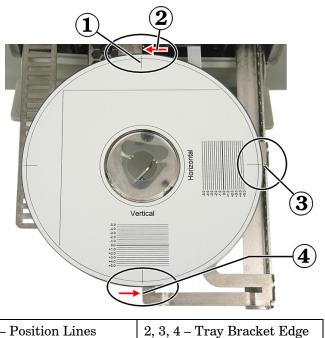
5. Select the **Print Test Pattern** button and the printer tray opens.



- 6. Place a full sized disc (120mm) on the printer tray.
- 7. When prompted, press the Disc button to close the printer tray.

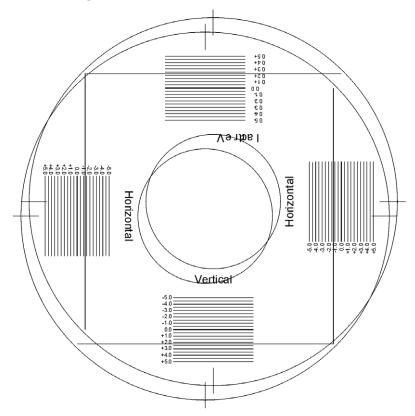


8. When it has finished printing, rotate the disc 180 degrees. Align three of the position lines, located on the outer edges of the disc, to the tray bracket edge as shown here.



1 - Position Lines

- 9. Select the **Print Test Pattern** button again.
- 10. When prompted, press the Disc button to close the printer tray.
- 11. When done printing, remove the disc.
- 12. Look at where each long line crosses the set of index lines.

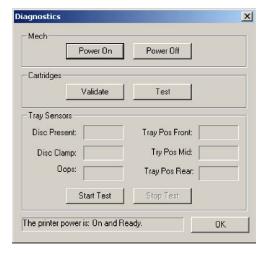


- 13. Enter the decimal index value where the long line crosses the index line in the Horizontal and Vertical group. Enter negative numbers with a negative character (-). Each line has a value of 0.5 units. The horizontal value from above would be about -1.2.
- 14. Select the **Save Settings** button.
- 15. To verify that the new values corrected the offset, place a new disc on the printer tray.
- 16. Select the **Print Test Pattern** button.
- 17. When prompted, press the Disc button to close the printer tray.
- 18. When it has finished printing, rotate the disc 180 degrees. Align the position lines on the outer edges of the disc to the printer's tray bracket.
- 19. Select the **Print Test Pattern** button.
- 20. When prompted, press the Disc button to close the printer tray.
- 21. After it completed printing the final pattern, remove the disc and check if the long lines cross the 0 index lines.
- 22. If the long lines do not cross the zero index line in the vertical and horizontal groups, make final corrections and try again.
- 23. Select the **Close** button.

- 24. Select the Disc button to close the printer tray.
- 25. Close the Printing Preference window.

### **Diagnostics**

At the **Advanced** tab under **Maintenance**, the **Diagnostics** dialog provides several device tests.



#### Mech

Select **Power Off** and **Power On** to cycle power to the tray mechanism. Select the **Power ON** button to resume operation.

### Cartridges

Select the Validate button to verify if the ink cartridges are authentic ink cartridges.

Select the **Test** button to test communications between the printer and the cartridges.

### Tray Sensors

The Tray Sensors function is for use only by, or at the direction of, Rimage Service personnel. Contact Rimage Corporation for additional information.

## **Update Autoloader Flash**

To update the autoloader's flash firmware, download the latest flash from the Rimage Website.

Save the flash file to the root of your local hard drive.

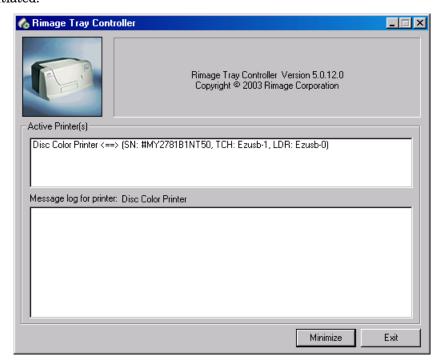
- 1. Open Production Server.
- 2. Stop the automation by making sure the **Start** button is not depressed as shown in here.



- **3.** Insert Rimage software suite disc into the CD-ROM drive or download the latest flash version from the Rimage web site.
- 4. Unzip the flash file if it was downloaded from the website.
- 5. From the menu bar, select **Options/Update Transporter Flash**.
- 6. Select the location of the flash file from the Rimage OfficeNet Software Suite disc or the saved location if it was downloaded from the website.
- 7. Double-click the filename *name*.bin file.
- 8. The updating procedure runs until the flash file is updated to the autoloader. A dialog box appears that it completed the flash update.

## **Tray Controller**

The Rimage Tray Controller icon ( ) is installed in the Windows Icon Tray once it was initiated.



The Tray Controller application automatically runs in the background after the Production Server starts. The Tray Controller is only available if the Liberty printer driver was installed. The Printer Tray opens only if the PC is connected to the printer and the Tray Controller is running.

# Find Additional Information

Each software module contains online Help. Help features a Table of Contents pane on the left side of the window and the selected topic on the right. You may need to resize the windows to fit your screen.

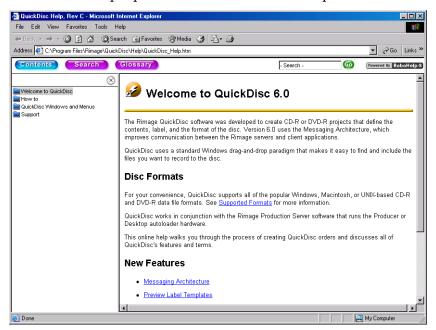
Locate your printed *Software Suite 6 Getting Started Guide* for a short tutorial on creating your first disc.

# **Online Help**

1. In QuickDisc for Windows, on the **Help** menu, click **Help Topics**. The initial QuickDisc help window displays.

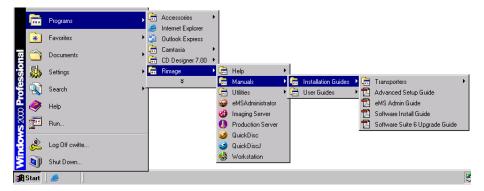


2. Select the desired Help topic from the Table of Contents pane.



### **Online Manuals**

Many other user manuals are installed in the Rimage folder and are organized by type as shown here:



# **Technical Support and Product Updates**

Support for the Desktop 4500 is available directly from your authorized reseller. If you have difficulty using the Desktop 4500, please review the User Guide before calling.

Online support for the Desktop 4500 is available on our website at <a href="http://www.rimage.com/technical/">http://www.rimage.com/technical/</a>

Be sure to register your Desktop 4500 online or complete and return the registration card so we can notify you of upgrades as they become available.

### **Related Documents**

The following Rimage Software 6.x manuals, Help, and related documents are installed on the Control Center:

- Software Suite 6 Getting Started Guide
- eMS Messaging System Overview and Administrator's Guide manual
- QuickDisc for Windows Online Help
- QuickDiscJ Online Help
- Messaging Administrator Online Help
- PSS 6/OfficeNET 6 Release Notes and Readme.txt
- Software Suite 6 Install Guide
- Production Server online Help
- Image Server online Help
- Advanced Setup Guide for Software Suite 6

Visit the Rimage Web site at <a href="http://www.rimage.com">http://www.rimage.com</a> for additional documentation.

# **Appendix**

# Desktop 4500 Specifications

Print Technology	Inkjet	
Disc Capacity	Input: 120	
	Output: 120	
Configurations	Two or four recorders, CD-R, DVD-R, or both	
Printing Resolution	Up to 4800 DPI	
Height	25.5 inches (57.2 cm)	
Width	17.5 inches (44.5 cm)	
Depth	21 inches (53.4 cm)*	
Weight	60 pounds (27.2 kg)	
Power	100-120/220-240 V, 1.8-0.75 A, 50/60 Hz	
Operating Temperature	60–86° F (16-30° C)	
Humidity	40–60% non-condensing	
Certifications	Emissions: FCC Class B	
	Safety UL, cULus, CE	
Interfaces	Firewire (IEEE 1394)	
	USB 1.1	
Software	OfficeNet Software Suite	
Recorders	The installed recorders have an ATAPI interface that has a small adapter board that converts it to a Firewire interface.	
Required AC Outlets	Two AC outlets, one for the printer, and another for the robotics. The PC requires at least two more outlets.	

<sup>\*</sup>Allow an additional 3.5 inches  $(9\ cm)$  at the back of the autoloader for attached cables.

# **Liberty Printer Specifications**

This appendix provides Liberty printer specifications, related documentation. The Rimage Liberty printer specifications are provided in the table below.

Printing Speeds	108 seconds for 100% coverage, full color, Photo Normal mode 20 seconds for 100% coverage, Text and Graphics mode 12 seconds for 20% coverage, Text and Graphics Best mode
Color Spectrum	16.7 million colors
Droplet Size	4 pl (pico-liter)
Pixel Density	5.76 million pixels per square inch
Ink Cartridges	Three Color (CMY)—Part Number 210753-001 Black—Part Number 210755-001
Printing Direction	Images print from top to bottom as the media moves out of the printer.
Printing Modes	Black or Three-color
Print Quality	Laser-quality black text, plus professional color photos
Media Types	Standard CD-R or DVD with ink-jet receptive surface coating,
Cartridge Capacity	300-500 full discs depending on print mode and image complexity.  Partial coverage images extend cartridge capacity.
Physical Properties	7.75" H x 18" W x 12.5" D (19.7 cm x 45.8 cm x 31.8 cm) 16 pounds (7.3 kg)
Printing Resolution	4800 dpi
Printer Driver	Supplied with drivers for Windows 2000 and Windows XP
Interface	USB 1.1
Power	100-120/220-240 V, 0.7-0.29 A, 50/60 Hz
Operating Temp.	59 °F-86 °F (15 °C-30 °C)
Relative Humidity	30%-70% non-condensing (dew)
Certifications	FCC Class B. Safety: cULus, CE
OS Compatibility	Windows 2000, Windows XP

# **Computer Specifications**

The computer selection is crucial for good system operation. In the following pages are minimum and recommended specifications for CD-R and DVD-R recorders. The computer must be dedicated just for running the Desktop autoloader.

## **Computer Requirements**

These are the minimum and recommended requirements to operate a CD-R Rimage system. The minimum requirements work fine for "duplication" operation. Duplication occurs when a client application sends a single order to record multiple copies to multiple or single recorders. The recommended requirements are for power users that use the "publishing" operation or want optimum system performance and reliability. Publishing occurs when a client application submits multiple orders of single disc images to the multiple recorders.

	Minimum PC Requirements	Recommended Requirements
Processor (Minimum)	Pentium III 933 MHz (133 MHz bus)	Pentium 4 1.8 GHz (400 MHz Front Side Bus)
Memory (Minimum)	256 MB SDRAM (PC133 compliant)	512 MB ECC, DDR-200 SDRAM
Video	800 x 600 Resolution (65,536 colors)	1024 x 768 Resolution (16-bit colors)
System Hard Drive(s)	An IDE hard drive that supports UDMA and Ultra ATA/133, with a 8 MB Cache buffer, rotation speed of 7,200RPM	One 18 GB for CD-R (36 GB for DVD-R), LVD SCSI hard drives, 15,000 RPM, Ultra160 – for operating system.
		Two 18 GB for CD-R (two 36 GB for DVD-R), LVD SCSI hard drives, 15,000 RPM, Ultra160 – for caching disc image files.
Partitioning and Formatting Drives	Partition system hard drive with 4 GB (20 GB for DVD-R) of free space for Production Server and space for your source files.	All partitions are formatted with NTFS using the default allocation unit size. System drive is a basic disk containing one primary partition (C:\). The remaining hard drive(s), used for caching, is formatted as one large basic partition using NTFS. (Change Production Server's first cache HD to drive letter F:\.)
Hard Drive Controller	An IDE hard drive controller that supports UDMA (Bus mastering) and Ultra ATA technologies. By default Windows 2000 does not install the correct device driver for this controller type. Obtain the driver through your computer manufacturer or Intel's Web site.	Adaptec 160 SCSI controller or equivalent.
USB Ports	One USB port for printer	One USB port for printer
Parallel Ports	Not Required	Not Required
Serial Ports	Not Required	Not Required
Firewire Ports	One IEEE 1394 Port*	One IEEE 1394 Port*
Rimage Software	OfficeNet Software Suite 6.x	OfficeNet Software Suite 6.x
Operating System	Windows 2000 Professional (Service Pack 3) or Windows XP	Windows 2000 Professional (Service Pack 4) or Windows XP

<sup>\*</sup> System includes a Firewire (IEEE 1394) Host adapter and cable.

After selecting the proper PC, go to the "Setup Computer" on the page 8.